Marl Lake
Resource Management Area

Preliminary Management Plan

Ontario

Ministry of
Natural
Resources

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Minister

MARL LAKE

RESOURCE MANAGEMENT AREA

PRELIMINARY MANAGEMENT PLAN

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1.0 Introduction

1.1 Planning Process

This document represents the culmination of the third phase of a planning program, the goal of which is to develop a long range resource management plan for the Marl Lake Resource Management Area.

As a preliminary plan, this document is intended for review within the Ministry of Natural Resources, other government ministries and agencies, by the two affected municipalities, various interest groups and interested individuals including owners of adjacent properties. All those reviewing it are encouraged to document any concerns they may have regarding any aspect of the proposed management program, and to register them with the Ministry of Natural Resources, Huronia District Office. This input to the planning process will be carefully considered as a final management plan is prepared.

Previous to preparation of this preliminary plan, two other documents were prepared. The first of these, an Issues Discussion Paper was circulated for public review in August of 1989. It provided a brief over-view of the property and its resources; outlined the planning process; discussed seven issues which required attention during the process and; invited anyone interested to submit comments/ideas/ information.

The second document prepared is a Background Information Summary Report. It is available as a supporting document and, in most cases, has been distributed with this preliminary plan. In addition to describing the area's resources, it identifies those which are of special interest or significance together with a discussion of the possible impacts various management programs might have on them. It provides targets for the production of resource products and the provision of opportunities for recreational activities and, finally, it provides in outline form, three possible management program scenarios which would enable the targets to be achieved. Management Strategy "C" has been chosen as the basis for this management plan.

1.2 Other Agency Involvement

The properties which make up the Marl Lake Resource Management Area were acquired in 1987 with funds provided by Wildlife Habitat Canada and utilized under the terms of an agreement signed in 1986 with the Ontario Ministry of Natural Resources. Through the agreement a program plan known as "A Co-operative Program for Securing Wetland Wildlife Habitat in Ontario" was prepared and is being implemented according to a series of strategies. First among these is the use of a list of priorities which facilitates decision making when determining which areas are to be protected.

Highest priority is given to Class I and II wetlands as categorized by "An Evaluation System For Wetlands of Ontario". This is followed by:

i) wetlands and staging areas of strategic importance to waterfowl;
ii) wetlands with potential to produce waterfowl;
iii) wetlands of ANSI (Areas of Natural and Scientific Interest) status and;
iv) habitat of endangered species

The Marl Lake Resource Management Area is a Class I Provincial wetland; it is considered to have potential to produce waterfowl; it provides habitat for several regionally and provincially significant species of birds and plants and; it is a candidate ANSI.

Additional factors are to be considered when securing habitat. In the case of Marl Lake the most relevant of these was the seriousness of threat to the wetland. This threat was and is in the form of actual recent and potential changes in landuse from rural to urban as the population of the Town of Wasaga Beach increases. It was decided, based on the above factors, that the most appropriate means of "securing" this wetland would be acquisition.

This management plan is being developed within the context of a second agreement, this between the Ministry and Ducks Unlimited Canada. Under this agreement a long range plan has been developed and is entitled "A Co-operative Program for Management of Waterfowl Habitat in Ontario". The goal and objectives statement of this plan are as follows:

Goal: Manage waterfowl habitat to perpetuate and increase waterfowl and other wetland-dependent wildlife.

Objectives:

1. Maintain, restore and create waterfowl habitat.
2. Enhance opportunities for public use and enjoyment of the waterfowl resource.

While these statements emphasize waterfowl, it is widely accepted that benefits are realized by a wide variety of wildlife species including many species of birds and mammals as well as by plants. This is acknowledged in a strategy of the above plan which states that, "Management of wetlands for waterfowl will be compatible with the welfare of populations of other plant and animal species".

Management Strategy "C" from the Background Information Summary report was selected as the basis for the Marl Lake Resource Management Area Management plan because it offers the greatest potential benefit to the greatest number of wildlife species while recognizing the need for a sensitive response to the habitat requirements of significant plant communities. In addition, it provides for a reasonable number of opportunities for public use and enjoyment of the area.

1.3 Location and Access

The Marl Lake Resource Management Area is a 174 ha property situated 110 km north of Toronto, in northwest Simcoe County, within and adjacent to the easterly limit of the Town of Wasaga Beach. It includes all of Lot 24, part of Lot 25 in Concession VII and part of Lot 24 in Concession VIII. It is part of an area which was within The Township of Flos prior to 1974 when the Town of Wasaga Beach was established.

Access to the property is provided by the well developed network of Provincial Highways and municipally maintained roads. Users of the property may use Highway 92 connecting Elmvale and Wasaga Beach or Highway 26 connecting Barrie with Stayner and Collingwood. The former provides access to the north side of the property via Golf Course Road and a local service road while the latter provides access, via Flos Road 24/25 to the south side of the property. Regardless of which of the above routes is used, access around the area, to the west, is provided on Golf Course Road and Concession Road Six/Seven, (Ryther Road). A portion of the latter forms the areas southern boundary.

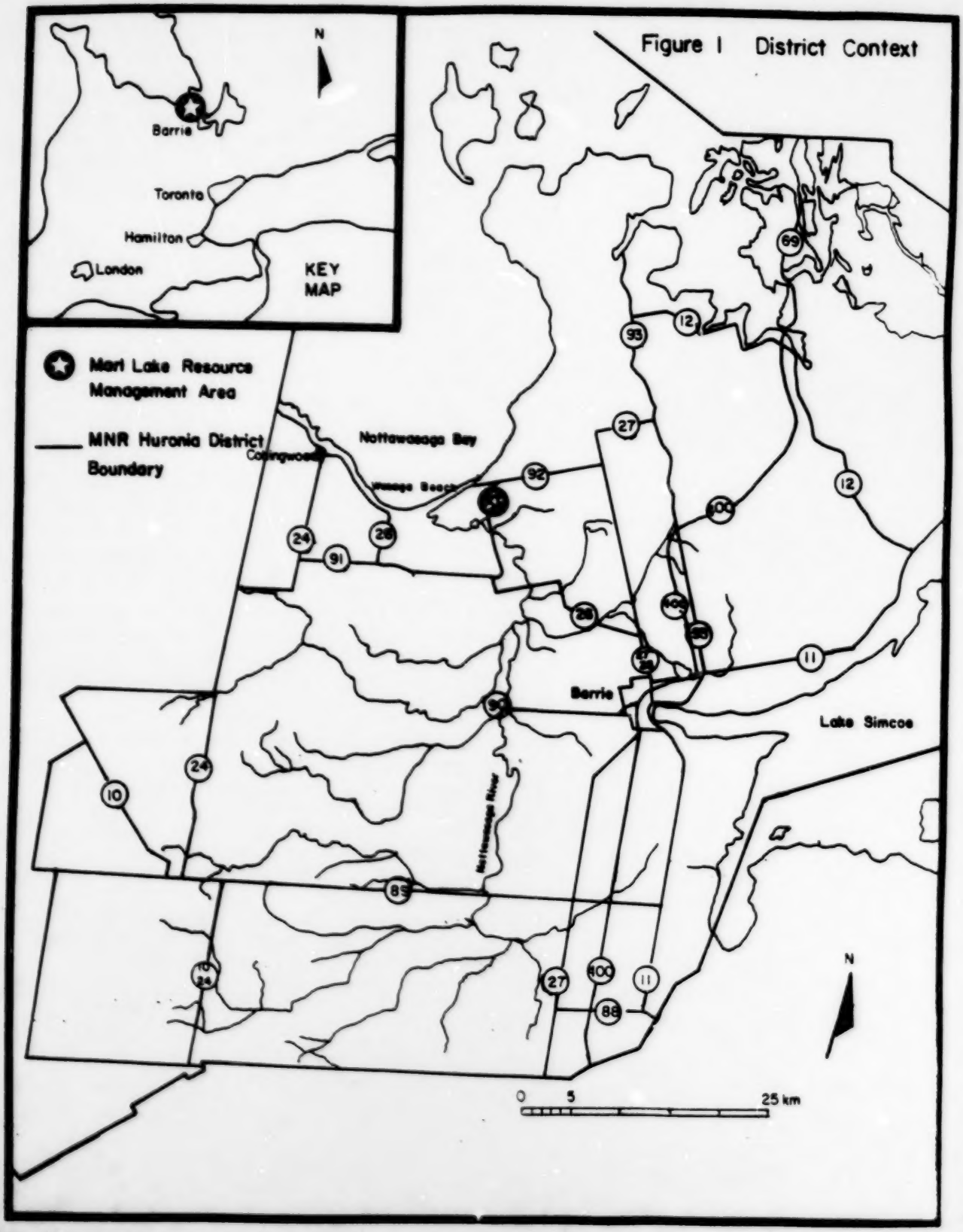


Figure 1 District Context
KEY MAP
Barrie
Toronto
Hamilton
London
N
Mart Lake Resource Management Area
MNR Huronia District Boundary
Nottawasaga Bay
Collingwood
Wasaga Beach
Barrie
Lake Simcoe
Nottawasaga River
0 5 25 km
N

1.4 Current Use and Management

The area traditionally has attracted recreationists and people involved in harvesting of resource products. Recreational activities have included: Hunting of waterfowl, upland small game and deer; sport fishing; canoeing; walking/hiking; nature appreciation/wildlife viewing; snowmobiling and; ATV off-roading. (Note: No Discharge of Firearms and Noise Control By-Laws have been in place since 1980 and 1981 respectively and have curtailed hunting with firearms on the property).

Utilization/harvesting of resource products has included trapping of furbearing mammals and lumbering. Trapping conducted by a single, licensed trapper continues currently. Lumbering activity has not occurred recently. Sport fishing has also been occurring on the open water portion of the wetland.

Currently, the area is not subject to any habitat management activity as part of any Ministry of Natural Resources program or programs of any other agencies. Management of the privately owned, 18 hole golf course adjacent to the property involves the pumping of water from the lake for irrigation of fairways and greens.

2.0 Goals and Objectives

2.1 Goal

The goals of the management program for the Marl Lake Resource Management Area are: to improve and maintain the area's wetland and upland waterfowl nesting and staging habitat and thereby improve the habitat of a variety of wildlife species and plant communities and; to provide opportunities for public use and enjoyment of the area.

2.2 Objectives and Targets

Objective statements are essential in a management plan for two reasons: (i) They expand upon and clarify the goal statement and; (ii) as they relate directly to numerical targets, they provide a means of evaluating the progress of plan implementation.

The management program objectives for Marl Lake Resource Management Area are:

1. To use an ecosystem approach as a basis for resource management decision making.

2. To improve the quality of the wetland and upland habitat available to nesting and staging waterfowl and, in so doing, stimulate an increase in the number of waterfowl produced and the number of migrating waterfowl utilizing the area each year.

3. To improve the quality of habitat available for a wide range of wildlife including other bird species, mammals, reptiles and amphibians.

4. To ensure the survival of vegetation communities and species of flora particularly those considered to be significant.

5. To provide opportunities for the hunting of waterfowl within the context of tightly controlled access and to provide opportunities for the archery hunting of upland game especially deer.

6. To continue to encourage the commercial utilization of furbearing mammals and to encourage the commercial utilization of carp.

7. To provide opportunities for warm water sport fishing.

8. To provide opportunities for other types of activities including walking/hiking, canoeing and nature appreciation/wildlife viewing.

2.2.1 Targets

The following numerical targets have been prepared to provide estimates of (i) the renewable resources which are expected to be produced in the resource management area on a sustained yield basis and; (ii) the numbers of recreational opportunities which can be made available to the public given the implementation of management programs. These values provide a means of evaluating the effectiveness of management programs over time. Conversely, specific characteristics of the management program influence/determine the size of the proposed targets.

Not all management objectives can be given a numerical value. In particular, objectives one and four above, cannot be evaluated numerically in a meaningful way however, achieving this objective is considered to be extremely important to the long term success rating of the management program.

The resource production targets for the Marl Lake Resource Management Area as follows:

a) **Waterfowl Production:** Current waterfowl production is considered to be less than 40 percent of the potential production or 60 birds per year. All of this production consists of ducks.

Potential production is estimated at 160 birds per year with 83 percent of this as ducks and the remainder as goose production.

Note: A waterfowl staging target has not been prepared. This is due to the difficulty encountered in forecasting use of any area by migrating waterfowl. It is reasonable to assume however, that improved habitat components especially food stocks will attract greater numbers of migrating birds especially in view of the area's proximity to the large, heavily utilized Tiny Marsh Provincial Wildlife Area.

b) **Fur Management:** Current harvest of furbearers from the study area totals 133 pelts with muskrat representing 94 percent of the harvest. Beaver and mink complete the total harvest.

Based upon documented harvest data from other managed wetlands it is predicted that populations of muskrat, beaver, mink and other furbearing mammals will increase substantially. Potential production, as measured by harvest, is **532 pelts** per year with relative percentages remaining constant.

c) **Hunting:** Currently, this activity is limited largely, to archery hunting of white tailed deer and, possibly other upland game. No estimate of the current participation level for this activity has been prepared.

It is estimated that **430** waterfowl hunting opportunities will be provided per year. This assumes six signed parking spaces are made available for a 45 day season (marsh freezes over after November 15 each year).

It is estimated that **225** archery hunting opportunities will be provided annually in the Marl Lake Resource Management Area. This is based upon three parking species being informally dedicated to those participating in the activity.

d) **Fishing:** It is estimated that, currently, fishing is the area's most popular recreation activity however, no meaningful estimate of the annual number of angler days spent on the lake has been made.

The target, expressed as fishing opportunities, is based upon the lake's ability or potential to produce fish. While this capability may be augmented by water level management, any increase will likely be minor in scale.

The lake can provide **650** fishing opportunities per year on a sustained yield basis.

e) **Other Recreation Activities:** These activities include walking/hiking, canoeing and wildlife viewing/nature appreciation. Currently, they are considered to be very minor given the lack of access in the form of parking, boat launching and trails.

The target for these activities indicates that the largest potential increase in use of the area will result from participation in these activities.

The combined target is 1800 opportunities per year.

3.0 Management Programs

3.1 Water Management

A program of water level management will be central to the overall management of the Marl Lake Resource Management Area. While the principle purpose of this program will be to improve waterfowl habitat, it will also provide benefits to numerous other species of birds which favour wetland habitat as well as to mammals and herptiles. The program will require construction of an earth fill dyke which will include a concrete flow control structure. The approximate location of the dyke as shown on Figure 2.

As designed the containment dyke will facilitate maintenance of a hydrological regime which would have existed prior to agricultural settlement activities which included drainage improvement projects.

The average normal operating level (N.O.L.) is proposed to be 183.5 metres above sea level. This level approximates a current average spring flood level. It is estimated that maximum spring flood levels are as high as $\pm$ 183.6 metres. The level will be dropped to 182.5 (lower operating level or L.O.L.) when required, to recycle nutrients in the marsh.

The water levels will be altered according to the results of a vegetation and waterfowl population monitoring program. Vegetation monitoring will be concentrated on two areas: i) the large floating and emergent mixed and shallow marsh and; 2) the narrow fen-like wet meadows along portions of the perimeter of the marsh. The floating and emergent mixed and shallow marsh areas represent critical waterfowl habitat. The condition of this vegetation (age, density) is an important factor in determining the marshes ability to sustain waterfowl. Raising and lowering water levels stimulates regeneration of these plant communities and the recycling of nutrients essential for food stocks.

Monitoring of the fen-like wet meadow vegetation community is required to ensure that this provincially significant plant community is not adversely affected by the water management program. This community is characterized by its ability to adapt to seasonal and long term fluctuations in water levels.

The N.O.L. (183.5) is considered to be a target level. Normal seasonal fluctuations as well as abnormal changes due to higher or lower than normal precipitation levels will result in variation from this level.

When it is deemed necessary to draw the water level down to the L.O.L. (182.5) the length of draw down time will be limited to the shortest period necessary to achieve the desired results.

3.2 Waterfowl Habitat Management

As stated in the previous section, water level management will be central to achieving the objectives of waterfowl habitat improvement. However, other types of management activity are required to improve the complete range of habitats required by a diverse population of waterfowl. In most cases these other activities will be beneficial for other types of wildlife.

(i) **Upland Nesting Habitat:** The open field areas south of the marsh will provide upland nesting habitat for waterfowl species such as mallards and blue-winged teal which prefer to nest in legume/grass cover adjacent to marsh habitat. Improving and maintaining this habitat will require periodic mowing to reverse the natural succession process as well as periodic re-seeding to maintain a healthy, thick vegetation cover. These open fields and meadows will also be used by numerous species of song birds, small mammals as well as by white tailed deer.

(ii) **Swamp Forest Habitat:** The fringe of swamp forest on the north and east sides of the marsh offers a variety of habitat for wildlife. Some species of waterfowl such as wood duck and hooded merganser are attracted to this type of habitat as are numerous species of song birds, small mammals and deer. Specific characteristics such as age, height and stocking (density) of the forest stands influence how attractive the community is to various wildlife. Within these areas a number of management techniques can be used to increase their attractiveness for wildlife. These techniques will include:

- erecting various types of nesting structures including boxes for wood ducks, hooded merganser, kestrel boxes, bat houses, screech owl boxes

- creating clearings in densely treed areas to improve habitat diversity. Some of these clearings will be located in association with the walking trail(s)

- selective thinning of densely treed areas to improve the overall growth rate of the forest stand

- using wood from clearing and thinning operations to create brush piles which will provide nesting habitat and shelter for birds and mammals

- planting of legume/grass seed mixtures in appropriate locations along the walking trail(s) and in clearings to provide cover and food for mammals and birds

In the process of implementing some of the above habitat improvement works, merchantable lumber may be produced. These materials may be sold into the local market or retained within the Ministry for utilization in facilities within this area or elsewhere within the Huronia District.

The above should not be considered as a complete listing of management techniques to be applied in the forested portions of the area. As the techniques are implemented and as more is learned about the area's wildlife populations, other, more appropriate techniques may be developed and implemented.

All of the above techniques could be implemented by interested groups such as local fish and game conservation clubs, naturalist clubs or school groups. The Ministry, through the Community Wildlife Improvement Program (CWIP) will encourage interested groups to become actively involved in habitat management. Materials required to implement approved projects will be supplied by the Ministry while labour will be provided by group members.

3.3 Fisheries Management

While the fisheries resources of Marl Lake are not large or otherwise unusual/significant, they do provide for recreational opportunities which, traditionally, have and will continue to attract people to the area.

The fish populations exist in the lake due in part, to the Marl Creek link between the lake and the Nottawasaga River which permits fish such as northern pike to migrate in or out of the lake. It is <u>not</u> anticipated that the dyke and flow control structure will interfere with fish migration which occurs during the spring, high water period when fish movement through the structure will be possible. Existing beaver dams on the Creek present obstacles to migration which will change constantly over time.

No fish stocking will occur in the foreseeable future.

Warm water, fisheries are generally very productive however, Marl Lake sport fishery is constrained by the water's shallowness resulting in winter time oxygen depletion and the attractiveness of the habitat to carp which out-compete other more sought after angling species.

While the lake's average water levels may be raised somewhat as a result of water level management, the most benefit to angling species, largemouth bass and northern pike will come from a reduction of the size of the carp population. It is anticipated that this goal will be difficult to achieve and more than one strategy will be required.

Initially, the strategies used will be:

(i) permit and encourage sport harvesting of carp through use of archery equipment

(ii) permit and encourage a commercial fisherman to net the species for sale as pet food, fertilizer or for human consumption

In addition to the above, to encourage the development of increased largemouth bass and pike populations, catch and release will be encouraged as a fishing technique. Signage and other forms of print media will be used to promote the benefits of the catch and release technique.

3.4 Fur Management

Populations of furbearers which prefer wetland habitat especially muskrat are expected to increase following implementation of a water level management program. As in the past, a licensed trapper will be encouraged to harvest the fur resource in and around the resource management area. Ideally, fur harvest will increase in proportion to the increase in populations however, fluctuating demand for furs will be a major influencing factor in achieving this goal.

Should populations increase substantially and trapping activity decrease, furbearers may become susceptible to more radical fluctuations in population size as a result of natural controls such as disease. Therefore furbearer populations and trapping activity will be monitored.

3.5 Other Habitat Management

Other management practices/techniques or facilities may have potential to benefit wildlife in the area or may be required to reduce the impact of wildlife on private property around the resource management area.

There is potential for an osprey nesting platform to be erected in the area. A suitable location for this facility will be identified following further monitoring of other bird nesting activity throughout the area. Osprey, while uncommon have been documented in the vicinity of Wasaga Beach. There is a pair nesting on a platform at Tiny Marsh P.W.A. They are attracted to areas where fish, their preferred food source, are readily available. These include shorelines of water bodies and wetlands.

The ministry will provide extension services to owners of adjacent agricultural lands which experience crop damage due to waterfowl feeding activity. This activity will usually be most significant during staging and fall migration. Potential for crop damage will depend upon the size of populations of field feeding waterfowl especially geese attracted to the area and this in turn may be influenced by the specific crops grown on neighbouring fields.

4.0 Proposed Development

Currently no facilities exist for accommodating public use of the area. In designing access and other use related facilities several factors have been considered. The area's proximity to an urban centre undergoing rapid urban growth is an unavoidable factor and one which provides an indication of the potential demand for access which may be placed upon the area. It may be reasonable to anticipate that, within reason, the greater the level of access provided, the greater will be the public use of the area. Therefore, the area's carrying capacity is a critical factor to be used in designing access facilities.

While the area is close to a significant, potential market it is also a relatively short distance from Tiny Marsh Provincial Wildlife Area which presently has a fully developed access and use facilities including an interpretive centre, viewing mound, trail system, year round staffing and visitor programs.

The area's carrying capacity has been considered in developing the targets presented in section 2.2. They recognize that limitations must be placed on access as a result of the relatively small total area of the property and to minimize potential conflicts.

4.1 Dyke and Flow Control Structure

As indicated in section 3.1 this facility is central to wildlife management programs in the resource management area.

While design, engineering, construction and operation of the facility will be the direct responsibility of Ducks Unlimited Canada, the final specifications regarding location, height, length and operating schedule will be determined in consultation with staff of the Ministry of Natural Resources.

The entire project will be subject to the requirements of a Class Environmental Assessment for Dams and Dykes under the Environmental Assessment Act.

Based upon preliminary surveying conducted by Ducks Unlimited staff, the preferred location for the dyke lies along a line roughly parallel to and approximately 75 m to the north of Concession Road 6/7. The overall length would be approximately 700 m.

4.2 Vehicle Access

Access will be provided in one location, adjacent to the south property boundary near the east limit of the existing field. It will consist of a parking area sized to accommodate approximately 12 vehicles. That portion of Concession Road 6/7 between the parking area and Ryther Road will be improved during construction of the dyke and flow control structure and will be maintained as a 'summer only' access to the parking area.

Use of the parking area will be controlled during hunting seasons through the placing of signs (see section 5.0).

4.3 Trail System

A trail system for walking/hiking will link the vehicle parking area with; the dyke and a water access point located near the dyke; waterfowl hunting stations; and, the viewing mound. It will enable visitors to gain access to most of the wildlife habitats/major plant communities.

Portions of the route will require substantial improvements such as elevated boardwalk or other forms of surface protection to protect soils and vegetation from compaction and trampling.

The portion of the trail linking the parking area with the viewing mound will be designed and built as a wheelchair accessible trail.

It will be appropriately signed to assist users in knowing where they are on the property and to warn of any known hazards.

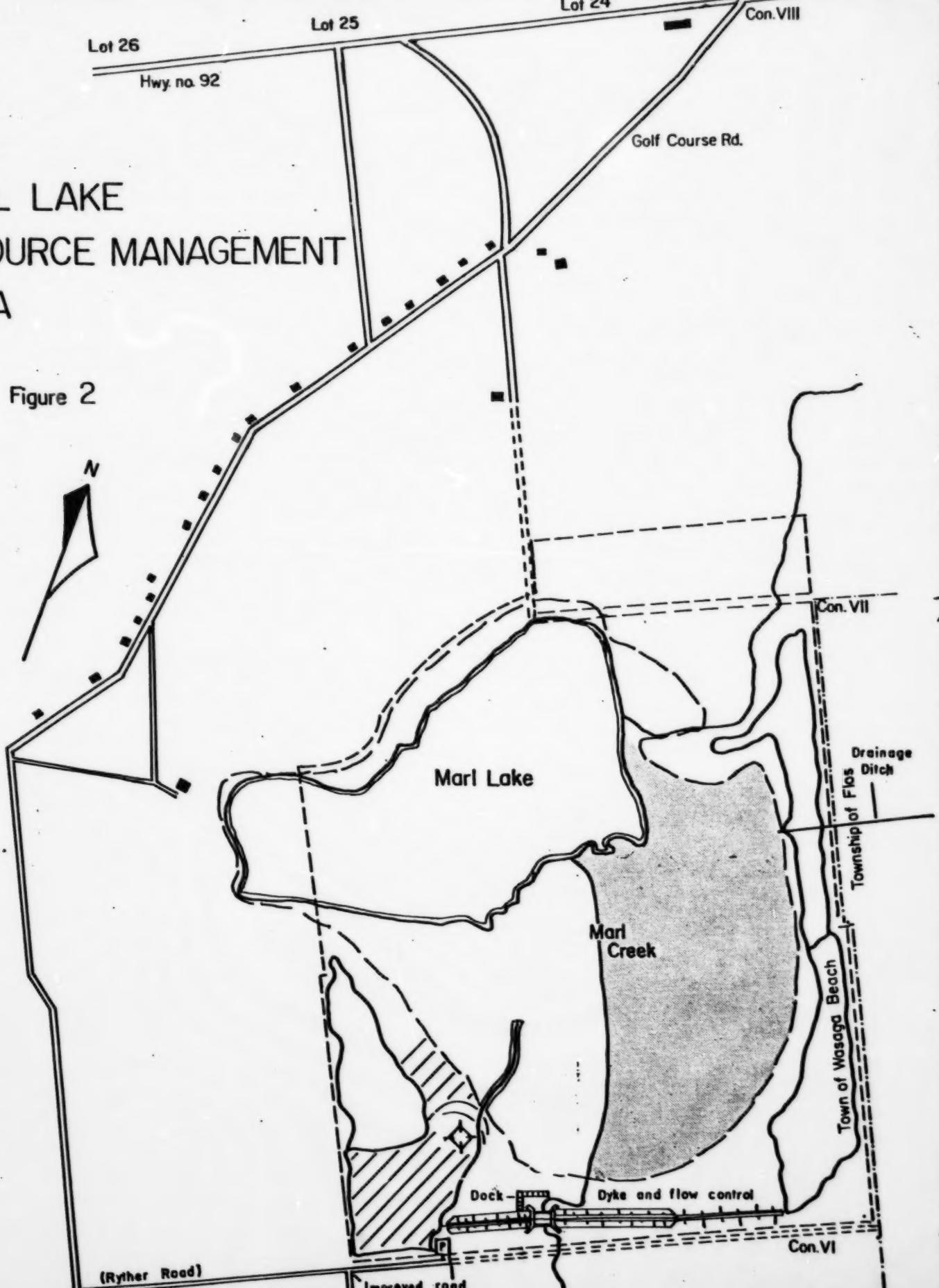
It is anticipated that the system will receive use in the winter for cross country skiing and snowshoeing. Access to the trail by snowmobiles will not be permitted and the trail will be routed to reduce the potential for use by snowmobiles or ATV's (all terrain vehicles). Continued use of the existing snowmobile trail located along the area's southern boundary will be encouraged.

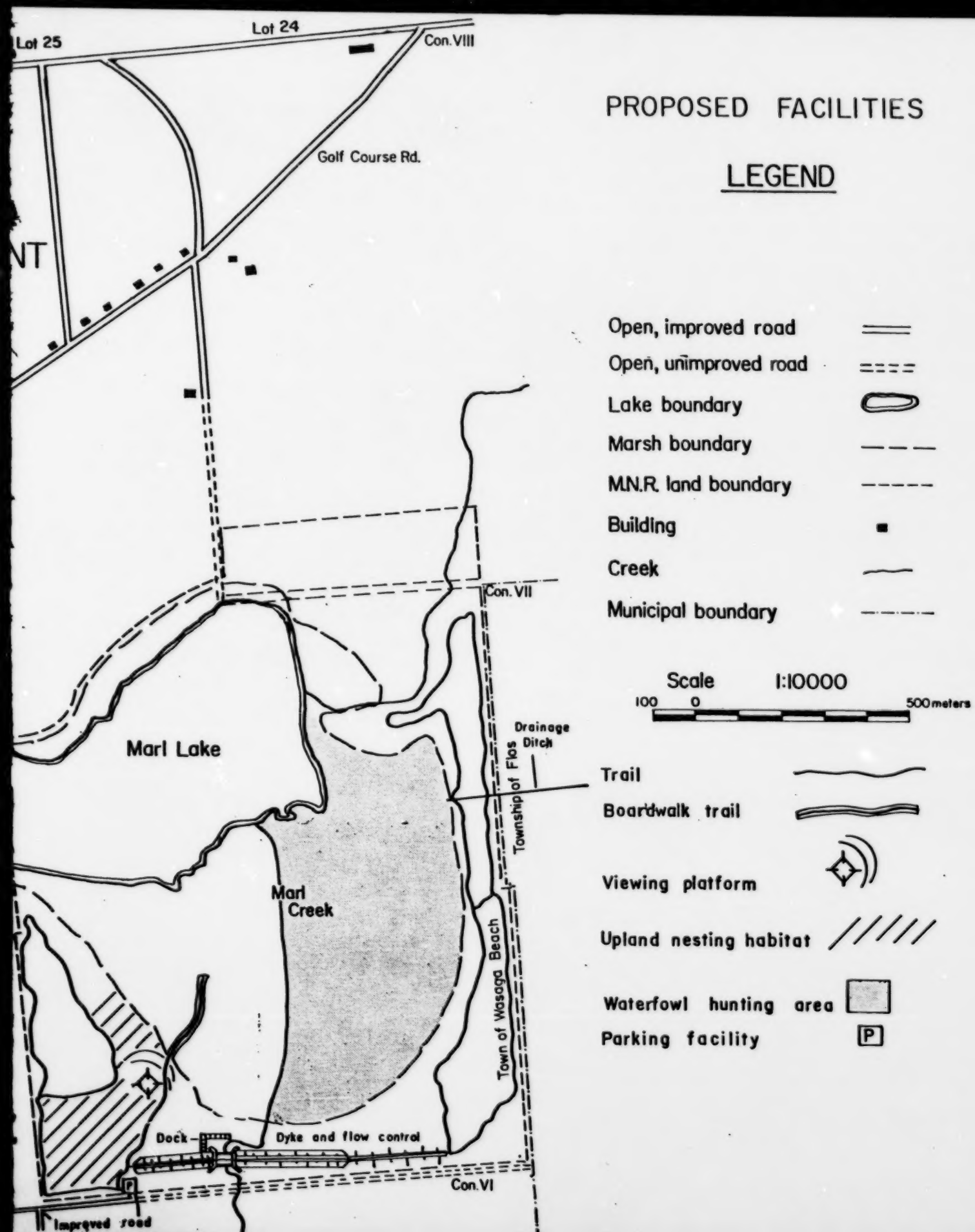
4.4 Water Access

Access to Marl Lake will be provided via Marl Creek from a small floating dock located adjacent to the dyke, near the flow control structure. Visitors will be required to make a short portage from the parking area. Portions of the stream channel (Marl Creek) through the cattail marsh are currently very narrow and shallow. Where necessary it will be widened to improve the quality and safety of access. No motorized boats will be permitted.

MARL LAKE RESOURCE MANAGEMENT AREA

Figure 2




Lot 25
Lot 24
Con. VIII
Golf Course Rd.
NT
Con. VII
Marl Lake
Drainage Ditch
Township of Flos
Marl Creek
Town of Wasaga Beach
Dock
Dyke and flow control
Con. VI
Improved road
PROPOSED FACILITIES
LEGEND
Open, improved road
Open, unimproved road
Lake boundary
Marsh boundary
M.N.R. land boundary
Building
Creek
Municipal boundary
Scale 1:10000
100 0 500 meters
Trail
Boardwalk trail
Viewing platform
Upland nesting habitat
Waterfowl hunting area
Parking facility
P

The nature of the emergent vegetation around the entrance to the outlet channel results in visitors having difficulty in locating the channel from the open water. In the interest of safety, markers will be placed and maintained to ease the problem of channel location.

4.5 Viewing Mound

Viewing mounds are often erected in managed wetlands as they provide for a greatly enhanced wildlife viewing experience. The level, expansive nature of wetlands means that a mound of modest height (less than 10 m), suitably located can provide for a panoramic view of an area.

The development of a mound at Marl Lake will not occur until after the waterfowl management program is fully implemented and a portion of the trail system developed. It will be located so as to be easily accessible from the parking area by wheelchairs. It will be an appropriate location at which to place information displays relative to the area's resources and management programs.

5.0 Recreation Management

5.1 Hunting

5.1.1 Waterfowl Hunting

The proposed water management program will stimulate an increase in both nesting and seasonal or migrating waterfowl populations utilizing the Marl Lake wetlands. It is proposed that a limited, sustainable level of waterfowl hunting be provided for within the Resource Management Area.

To facilitate this recreational activity negotiating of an agreement/understanding with the Town of Wasaga Beach will be required.

While it is not appropriate to speculate at this point as to the specific details of an agreement, a limited hunting program would likely involve the following elements:

- A specific, pre-determined number of parking spaces, designated by numbered signs, for use by those wishing to hunt waterfowl (this number would not likely exceed six);

- An equivalent number of corresponding numbered hunting stations distributed according to available habitat and safety considerations;

- A "key" or "orientation" map located at the parking area to enable visitors to locate their station;

- Additional signage, in the parking area, regarding the time periods when hunting would be permitted.

Alterations to these basic elements could be made from year to year or within a single season based upon data gained through monitoring of waterfowl populations and conflicts with adjacent landowners.

5.1.2 Archery Hunting

It is not anticipated that the status of this activity will change significantly as a result of implementing management programs on the property. The provision of a parking facility will enable users to park away from roadsides.

The activity will continue to centre upon hunting of white tailed deer.

5.2 Wildlife Viewing

The availability of opportunities to peruse this activity in the area will be promoted. This will likely be achieved through preparation and distribution of a brochure which will provide information on the area's flora and fauna especially the provincially/regionally significant species of birds.

5.3 Other Recreational Activity

It is anticipated that the location of the parking facility will strongly influence the patterns of use which occur in the area. It is recognized however, that some of the existing use patterns may continue especially use of the local road between Golf Course Road and the north boundary of the area. Use of this road for the purpose of gaining access to the lake will be discouraged.